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PURAFIL ENVIRONMENTAL CORROSIVITY REPORT

11-Nov-2010

Company: 118499

Room/Area ID: Reference #:



 Sales Order #:
 C002726

 CCC Panel #:
 P68731

 Date In:
 04-Oct-2010

 Date Out:
 19-Oct-2010

Days In Service: 15

CCC Panel # P68731

ISA Class G2 Moderate

Copper Corrosion 809 Å/30 Days

Silver Corrosion 320 Å/30 Days

(see next page for complete analysis)

Summary for PURAFIL CCC # P68731

The electrolytic reduction analysis on Corrosion Classification Coupon #P68731 shows the presence of moderate concentrations of contaminants and high/variable humidity in the environment tested. The hydrogen sulfide level is expected to range between 3 and 10 ppb, sulfur dioxide between 10 and 100 ppb, and chlorine between 1 and 2 ppb. The presence of moisture and small amounts of inorganic chlorine compounds greatly accelerates sulfide corrosion. The effects of corrosion are measurable and may be a factor in determining equipment reliability.

Your local representative for additional information and assistance is:

Environmental Health and Eng

117 Fourth Avenue, Needham MA 02494, USA

tminegishi@eheinc.com

Purafil, Inc. / 2654 Weaver Way, Doraville GA 30340 USA / (770) 662-8545 / (770) 263-6922 Email: purafil@purafil.com / Internet: http://www.purafil.com

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PURAFIL CCC # P68731 Analysis Results

Corrosion Film Composition Projections				Gold Coupon - Magnified 20x
	<u>30 Days</u>	<u>1 Year</u>	<u>5 Year</u>	
Copper Films				
Cu ₂ S	0 Å	0 Å	0 Å	
Cu ₂ O	311 Å	1084 Å	2423 Å	
Unknowns	498 Å	1739 Å	3888 Å	
Totals	809 Å	2823 Å	6311 Å	
Silver Films				
AgCI	64 Å	777 Å	3886 Å	
Ag ₂ S	256 Å	3120 Å	15601 Å	
Unknowns	0 Å	0 Å	0 Å	
Totals	320 Å	3897 Å	19487 Å	
Gold Pore Corrosion:				
Note: 1000 Å = 0.1 micron				

Equipment Reliability Correlation (ISA Standard S71.04-1985 for Copper)

ISA Class GX: SEVERE Electronic/electrical equipment not expected to survive due to corrosive attack. (Cu >= 2000) 2000 F 1

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Å

1500

1000

500

300

0

Silver

(320 Å)

ISA Class G3: HARSH

High probability that corrosive attack will occur. Probable effect on equipment reliability in less than 5 years. (1000 <= Cu < 2000)

ISA Class G2: MODERATE

Effects of corrosion measurable and may be a factor in determining equipment reliability. Possible effects in less than 5 years. $(300 \le Cu < 1000)$

ISA Class G1: MILD

Corrosion is not a factor in determining equipment reliability. (Cu < 300)

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Copper

(809 Å)